

ABSTRACT OF THE DISCLOSURE**PERFORMANCE SIMULATION PROCESS, AND MULTIPROCESSOR
APPLICATION PRODUCTION PROCESS, AND DEVICES FOR IMPLEMENTING
SAID PROCESSES**

5

The disclosure relates to a process for simulating a multiprocessor application placed on a target architecture, characterized in that it includes at least the following steps:

- 10 (a) a step (E2) to prepare the simulation to produce a services graph (D3), using firstly a tasks graph (D2) and secondly a list of mechanisms and their definition (A2);
- (b) a step (E3) to execute the simulation to determine the performance of the placed application, using a behavioral model (A3) of the target architecture and the services graph (D3).

- 15 The disclosure also relates to a process for producing a multiprocessor application, characterized in that it includes at least the following steps:

- (a) a step (E1) to place the application on the target architecture using firstly a functional description (D1) of said application, and secondly the list of resources (A1) of the target architecture in order to produce a tasks graph (D2);
- 20 (b) a step (E2) to prepare a simulation to produce a services graph (D3) starting firstly from a tasks graph (D2), and secondly from a list of mechanisms and their definitions (A2);
- (c) a step (E3) to execute the simulation to determine the performance of the placed application, using a behavioral model (A3) of the target architecture and
- 25 the services graph (D3).

The invention is particularly applicable to multiprocessor applications requiring high computing power, such as systematic signal processing (SSP) for radar, image processing, and real-time data compression.